# **SIEMENS**

Product data sheet 3RF3405-1BD24



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 5.4A 40 DEGREES C 48-480V / 110-230V AC REVERSE SWITCHING INSTANTANEOUS SCREW TERMINALS

General technical data:			
product brand name		SIRIUS	
product designation		solid-state reversing contactor	
<ul><li>_1 / of the accessories that can be ordered</li></ul>		Link module	
• _2 / of the accessories that can be ordered		Connection adapter	
Manufacturer article number			
<ul><li>_1 / of the accessories that can be ordered</li></ul>		3RA2921-1BA00	
• _2 / of the accessories that can be ordered		3RF3900-0QA88	
Protection class IP		IP20	
Insulation voltage / rated value	V	600	
Installation altitude / at a height over sea level / maximum	m	1,000	
Ambient temperature			
during storage	°C	-55 +80	
during operating	°C	-25 +60	
Resistance against shock			
• according to IEC 60068-2-27		15g / 11 ms	
Resistance against vibration			
according to IEC 60068-2-6		2g	
Resistance against the impulse current / rated value	А	600	
Active power loss / total / typical	W	9	

Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		К
according to DIN EN 61346-2		Q
Product function		reversing switch
Main circuit:		
Number of poles / for main current circuit		3
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		2
Operating frequency		
• rated value	Hz	60 50
Operating voltage		
• at 60 Hz / at AC / rated value	V	48 480
• at 50 Hz / at AC / rated value	V	48 480
Operating current		
• minimum	mA	500

• at 60 Hz / for AC	V	40 506
Service power / at AC-3 / at 400 V		
• rated value	kW	2.2
Derating temperature	°C	40
Tolerance of the line frequency	Hz	5
Relative symmetrical tolerance / of the operation frequency	%	10
I2t-level / maximum	A²-s	1,800
Voltage slew rate / at the thyristor / for main contacts		
maximum permissible	V/µs	1,000
Block voltage / at the thyristor / for main contacts		

Α

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mΑ

1,200

10

5.4

40 ... 506

Control circuit:				
Type of voltage / of the controlled supply voltage		AC		
Control supply voltage frequency				
• 1 / rated value	Hz	50		
• 2 / rated value	Hz	60		
Relative symmetrical tolerance				
of the control supply voltage frequency	%	10		
of the supply voltage frequency	%	10		

• at AC-3 / at 400 V / rated value

• at 50 Hz / for AC

• maximum permissible

Reverse current / of the thyristor

Working area related to the operating voltage

Control supply voltage		
•1		
• at 50 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 60 Hz / for AC		
• initial rated value	V	90
• final rated value	V	253
• at 50 Hz / for AC / final value for signal<0>-recognition	V	40
• at 60 Hz / for AC / final value for signal<0>-recognition	V	40
Control current		
• for AC / rated value	mA	15
at minimum control supply voltage / for AC	mA	2
Auxiliary circuit:		
Number of NC contacts / for auxiliary contacts		0
Number of NO contacts / for auxiliary contacts		0
Number of change-over switches / for auxiliary contacts		0
Installation/mounting/dimensions:		
mounting position		vertical
Type of mounting		screw and snap-on mounting onto 35 mm standard mounting rail
Type of fixing/fixation / series installation		Yes
Tightening torque / of the screw for fastening of the operating resource	N∙m	1.5
Design of the thread / of the screw for fastening of the operating resource		M4
Width	mm	45
Height	mm	95
Depth	mm	114.3
Distance, to be maintained, to the ranks assembly		
• upwards	mm	70
• downwards	mm	50
Connections:		

for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>	screw-type terminals
Design of the thread / of the connection screw	
• for main contacts	M4
of the auxiliary and control pins	M3

Product function / removable terminal for auxiliary and control circuit		Yes
Type of the connectable conductor cross-section		
• for main contacts		
• solid		2x (1.5 2.5 mm²), 2x (2.5 6 mm²)
• finely stranded		
<ul> <li>with conductor end processing</li> </ul>		2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
• for AWG conductors / for main contacts		2x (14 10)
for auxiliary and control contacts		
• solid		1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
• finely stranded		
<ul> <li>with conductor end processing</li> </ul>		1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
<ul> <li>without conductor final cutting</li> </ul>		1x (0.5 2.5 mm²), 2x (0.5 1.0 mm²)
• for AWG conductors / for auxiliary and control contacts		1x (AWG 20 12)
Tightening torque		
• for main contacts / with screw-type terminals	N∙m	2 2.5
• for auxiliary and control contacts / with screw-type terminals	N∙m	0.5 0.6
Tightening torque (lbf-in)		
• for main contacts / with screw-type terminals	lbf∙in	18 22
• for auxiliary and control contacts / with screw-type terminals	lbf∙in	7.5 5.3
Skinning length / of the cable		
• for main contacts	mm	10
for auxiliary and control contacts	mm	7

Certificates/app	orovals:				
Verification of su	itability			CE / UL / CSA / CCC / C-TICK	<
General Produc	t Approval		EMC	Declaration of Conformity	Test Certificates
(SA)	P T	(UL)	C-TICK	EG-Konf.	Type Test Certificates/Test Report

UL/CSA ratings			
yielded mechanical performance (hp) / for three-phase squirrel cage motors			
• at 200/208 V / rated value	hp	1	
• at 220/230 V / rated value	hp	1	
• at 460/480 V / rated value	hp	3	
Operating current (FLA) / for three-phase squirrel cage motors			
• at 480 V / rated value	А	4.8	

# Further information:

#### Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

### Industry Mall (Online ordering system)

http://www.siemens.com/industrial-controls/mall

#### **CAx-Online-Generator**

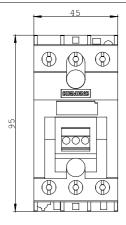
http://www.siemens.com/cax

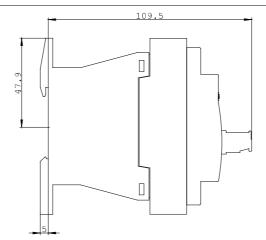
### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

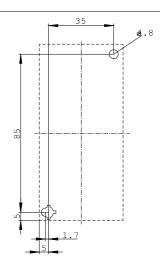
http://support.automation.siemens.com/WW/view/en/3RF3405-1BD24/all

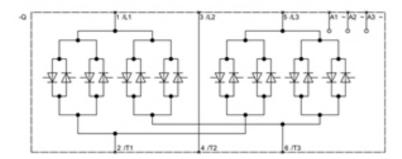
## Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RF3405-1BD24









last change:

Feb 4, 2013